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10/603,350	06/25/2003	Claudio Caldato	60980086-3	2592

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
BAYAT, ALI	
ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,350

Applicant(s)

CALDATO ET AL.

Examiner

Ali Bayat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/17/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-2,4,5,6,7,8,15,17 and 18 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1,3,4,5,6,7,,10,11 and 12 of prior U.S. Patent No.6,744,918, respectively note that claims 1 and 2 combined of instance Application corresponds to claim 1 of prior U.S. patent No. 6,744,918. This is a double patenting rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 3-5 of claim 16 the phrase "in the first layer has a resolution lower than the image information contained in the first layer" is not clear to the Examiner.

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Claim 17 is also rejected under 35 U.S.C. 112, second paragraph, because it depends from rejected claim 16.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,5 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Macleod (U.S. 5,778,092).

In regard to claim 1, Macleod provides for a document analysis method to detect BW and color areas comprising the following steps: step 1) getting an input image data to be split into elementary unit of information (Fig.1 element 101 col.4 lines 60-61); step 2) analyzing the input data to get a colorfulness indicator of each elementary unit of information of the input data (Fig.1 element 102 col.4 line 65-col.5 line 3); step 3) assigning each elementary unit of information to either a BW layer or a color layer depending on the colorfulness indicator of said each elementary unit of information (Fig.1 elements 103 and 104 col.5 lines 3-16); step 4) determining, in order to obtain a desired format for the output data, either to select (Fig.1 element 106 col.5 lines 17-29) or to combine the BW and color layers(Fig.1 element 106 col.5 lines 22-29).

With regard to claim 15. See the rejection of claim 1. It recites similar limitations as claim 15. Hence it is similarly analyzed and rejected.

As to claim 18, Macleod provides for a method for acquiring a document, wherein the second layer is used for managing text information (Fig.1 element 103, col. 1 lines 52-53).

In regard to claim 9, MacLeod provides for a scanning device to acquire documents characterized by comprising an input that receives an input image data (Fig.1 element 101, col.4 lines 60-61), and is connected to a layer creator component (Fig.1 element 102 col.4 lines 65-col.5 line 3), which in turn outputs a first (Fig.1 element 103) and a second layer (Fig.1 element 104), such layers having different data compression rates (col.5 lines 20-30).

With regard to claim 10, Macleod provides for a scanning device according to claim 9, characterized in that said first layer assembles BW data (Fig.1 element 103 col.5 lines 1-7) and said second layer assembles color data (Fig.1 element 104 col.5 lines 8-16).

As to claim 11, Macleod provides a scanning device according to claim 10, characterized in that said layer creator component comprises a threshold block connected in series to a compressor (Fig.1 element 102, col.4 lines 65-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod et al. (U.S. 5,778,092) in view of Beretta (U.S. 5,883,9790).

In regard to claim 12, Macleod provides a scanning device according to claim 10, characterized in that said layer creator component comprises a threshold block connected in series to a compressor (Fig.1 element 102, col.4 lines 65-67). Macleod does not provide for G4 compressor. Beretta provides for G4 compressor (Fig.11 element 142, col.13 lines 55-67). The prior arts of Macleod and Beretta are combinable because they are from the same field of endeavor (color compression). It would have been obvious to a person of ordinary skill in the art at time the invention was made to incorporate the teaching of Beretta with the system and method of Macleod for modifying the system and method of Macleod. Because compressing the image data in accordance with the group 4 Facsimile standard (G4) can be transmitted via transmission means over the limited bandwidth channel, for selected devices.

5. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod et al. (U.S. 5,778,092) in view of Watson (U.S. 5,629,780).

In regard to claims 2-4 Macleod provides for the document analysis method (Fig.1 element 102), but does not provide for the step of analyzing the input data further comprises the step of getting the input data into a Chroma space format, RGB format to a chroma space format and down sampling a chroma indication channel. However in the same field of endeavor Watson teaches the Chroma space format, RGB format to a chroma space format and down sampling a chroma indication channel (col.6 lines 43-

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60). It would have been obvious to a person of ordinary skill in the art at time the invention was made to incorporate the teaching of Watson (Chroma space format and down sampling of Cr and Cb and converting the input data from the RGB format to a Chroma space format) with the system and method of Macleod, because for compressing images to reduced number of bits by employing a Discrete Cosine Transform (DCT) in combination with visual masking including luminance and contrast techniques as well as error pooling techniques all to yield a quantization matrix optimizer that provides an image having a minimum perceptual error for a given bit rate, or a minimum bit rate for a given perceptual error (col.1 lines 16-22).

With regard to claims 5 and 6, Macleod provides for applying a threshold or a rule for the colorfulness indicator to the down sampled data, and the step of labeling ON the elementary information having a color fullness above the threshold and OFF the elementary information having a colorfulness lower than the threshold (Fig.1 element 102, col.4 line 65-col.5 line 16).

As to claim 7, Macleod provides for a document analysis method, characterized in that the threshold value depends on the final device, which receive the image data (col.3 lines 48-52, note facsimile devices).

In regard to claim 8, Macleod provides for a document analysis method, characterized in that the BW elementary information are employed to assemble a first layer (TEXT) containing the portion of text comprised in the input data (Fig.1 element 103, col.13 lines 55-67 and the color elementary information are employed to assemble

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a second layer (IMAGE) containing the portion of image comprised in the input data (Fig.1 element 104, col.4 line 65-col.5 line 3).

Allowable Subject Matter

6. Claims 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons For Allowance

7. The following is an examiner's statement of reasons for allowance: the prior art of Macleod provides for analyzing the input data to get a colorfulness indicator of each elementary unit of information of the input data (Fig.1 element 102 col.4 line 65-col.5 line 3); assigning each elementary unit of information to either a BW layer or a color layer depending on the colorfulness indicator of said each elementary unit of information (Fig.1 elements 103 and 104 col.5 lines 3-16); determining, in order to obtain a desired format for the output data, either to select (Fig.1 element 106 col.5 lines 17-29) or to combine the BW and color layers(Fig.1 element 106 col.5 lines 22-29). The prior art of Macleod either alone or in combination failed to teach or suggest for **scanning device, characterized in that said layer creator component further comprises a RGB to HLN converter, having an output channel connected to a series of a down scale device, an histogram and threshold selector, a look-up-table, a blob analysis block, a fill regions block and a further compressor as cited in claim 13.**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Bayat whose telephone number is 571-272-7444.

The examiner can normally be reached on M-F 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ali Bayat 
Patent Examiner
Group Art Unit 2627
1/07/06


SANJIV SHAH
PRIMARY EXAMINER